

## NEW DESCRIPTIONS

### DESCRIPTIONS OF THREE NEW SUBSPECIES OF BUTTERFLIES FOUND IN NEPAL<sup>1</sup>

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(With four text-figures)

(1) ***Parnassius epaphus chiddii*** spp. nov.

The Common Red Apollo, *P. epaphus* (Oberthur 1891) is widely distributed all along the Himalayan range. In Nepal it is generally rarer than the Common Blue Apollo, *P. hardwickei* (Gray 1831) being restricted to higher altitudes, and it therefore seems more naturally to form isolated races. This is indeed the fourth one to be described from Nepal, the others being —

*P. epaphus boschmai* (Eisner 1964) from Solu Khumbu in E. Nepal.

*P. epaphus robertsi* (Epstein 1979) from Manang in C. Nepal,

*P. epaphus capdevillei* (Epstein 1979) from Mustang in C. Nepal.

*P. epaphus chiddii* was found in one locality in the remote Mugu district of N. W. Nepal in the Summer of 1980.

#### DESCRIPTION

*Male*—upperside: Ground colour—forewing is transparent white heavily dusted with black, hindwing is opaque white. The black markings follow the usual pattern and are heavy. The forewing submarginal black spots are completely joined up to form a diffuse band, leaving only a narrow band of white spots between this and the almost entirely grey margin. The

marginal white spots are small and faint. The hindwing submarginal spots are also joined into a chain of black lunules, again leaving only a very narrow band of white between that and the marginal grey. The hindwing red spots are large and bright.

The underside corresponds with the upper, having heavy black, and prominent red markings.

*Female*—This is identical in markings to the male. Note that in many forms of *P. epaphus* the female is darker.

#### DIFFERENCES WITH OTHER SUBSPECIES

The main difference with the other three subspecies given above is the submarginal band of both fore and hindwings. The closest approach to this is found in some *P. epaphus robertsi* females. A summary of the main features of all four subspecies is given below. Note that the following features are *not significant*—

- (a) The forewing preapical red spots — two specimens have 2, one has 1 and two have none (under and uppersides the same in each case.)
- (b) The upperhindwing anal red spot — present in three, absent in two.

#### SIZE

*Measurement* — forewing—base to apex = 25 mm. (both sexes.)

#### HABITAT

It was found on an open rocky ridge above the tree-line. The south side was a precipitous

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1. *Dallacha hyagriva hyagriva* (for comparison with others)  
 male — male underside  
 female — female underside

Courtesy: British Museum, Natural History.

slope with little vegetation, and the north side was a very steep grassy one. Further up the ridge was entirely of rocks with scarcely any vegetation.

men (the Holotype).

DATA

*Holotype* — female — Lekh above Chiddi — 13000 ft. (=4000 m.) 1 Aug. 80.

*Allotype* — male — Lekh above Chiddi — 13000 ft. (= 4000 m.) 2 Aug. 80.

*Paratypes* — 1 m, 2 f — Lekh above Chiddi — 13000 ft. (= 4000 m.) 2 Aug. 80.

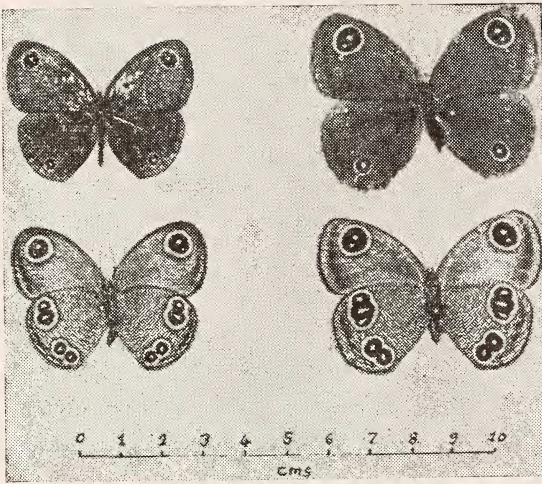
(2) *Metaporina leucodice debdice* ssp. nov.

The Himalayan Blackvein, *M. leucodice* (Eversmann) occurs commonly in the Western Himalayas, but until 1980 had not been recorded as far east as Nepal. It was found locally plentiful in the little explored Jumle area of N. W. Nepal, and has been named after the Nepali collector who obtained the first speci-

DESCRIPTION

*Male* — Upperside white, forewing with black discocellular bar and postdiscal band (from 2 to costa, bulging outwards in 4), veins and termen narrowly black. Hindwing — ends of veins and termen narrowly black; discal sagittate line showing through from below. Underside-Forewings white, apex pale creamy yellow; black markings as above, but post discal band and termen less heavily marked. Hindwing pale creamy yellow, precostal area bright yellow; veins uniformly black, fine but clearly defined discal sagittate line.

*Female* — above as male, but very slightly yellowish, and forewing postdiscal band heavier. Below — exactly as male, except the yellow on hindwing is one shade deeper.



2. *Dallacha hyagriva nepalica*  
 male — female  
 male underside female underside  
 Courtesy: Natural History Museum, Nepal.

**SIZE**

Measurement — forewing (base to apex) —  
 Male — 26-31 mm. (average 30 mm.)  
 Female — 30-32 mm.

**DISCUSSION OF SUBSPECIES**

*M. leucodice soracta* (Moore 1857) would be the subspecies expected in Nepal (reportedly common at Mussoorie.) But this ssp. has the upperforewing postdiscal band obsolete in 3, which is certainly not the case of these Nepal specimens.

*M. leucodice sara* (Evans 1932) from Kumaon would also be possible, but that has the upperhindwing discal sagittate line strongly marked in the female which is hardly true of the present specimens. Also the upperforewing is supposed to have large spots in 2 and 4, which isn't how the present specimens would normally be described where those spots are part of a line also going through 3.

It is therefore suggested that these Nepal

specimens should be considered a new subspecies.

**HABITAT**

It was found at first in open country, mostly around flowering bushes, often settling high on the leaves, and sometimes on flowers. Later on it was found at slightly higher altitude on the edge of the jungle area. Total altitude range — 7600-8500 ft. (2320-2600 m.) All specimens except the paratypes (e) were from the Jumla area.

**DATA**

*Holotype* — male — Bora Gau, JUMLA 19 May '80 7800 ft. (2380 m.)

*Allotype* — female — Bora Gau, JUMLA 20 May '80 7600 ft. (2320 m.)

*Paratypes* — (a) 1 m type locality 19 May '80 7800 ft. (2380 m.)

(b) 9 m type locality 20 May '80 7800 ft. (2380 m.)

(c) 2 m Jagard Khola 20 May '80 7900-8000 ft. (2410-2440 m.)

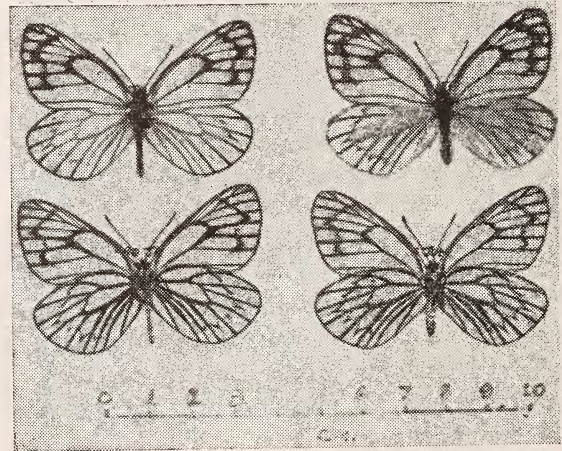


Fig. 3. *Metaporia leucodice debdica*  
 Male — female  
 male underside female underside  
 Courtesy: Natural History Museum, Nepal.

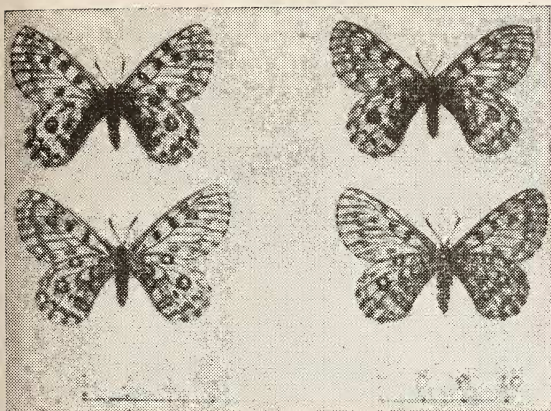


Fig. 4. *Parnassius epaphus chiddii*  
 male — female  
 male underside female underside

Courtesy: Natural History Museum, Nepal.

(d) 13 m Poi Village 23 May '80 8000 ft. (2440 m.)

(e) 2 m Gungardhi W. (MUGU) 30 May '80 8300 ft. (2530 m.)

(f) 7 m Jumla N. W. 3 June '80 7900 ft. (2410 m.)

(g) 4 m, 3f type locality 4 June '80 7800-8500 ft. & above (2380-2600 m.)

(h) 8 m, 2f type locality 5 June '80 7800 ft. (2380 m.)

(3) ***Dallacha hyagriva nepalica* ssp. nov.**

It is difficult to tell who to attribute this to, since the species has been recorded in Nepal for a number of years. There are Nepal specimens of the Brown Argus, *D. hyagriva* (Moore 1857) in the British Museum Collection which are obviously different from those from the Western Himalayas. It appears that no-one has yet described them. The types were obtained by me in 1975.

DESCRIPTION

*Male* — above dark brown with very slight submarginal dark bands, a large bipupilled apical ocellus on the forewing, and a smaller

single pupilled tornal one on the hindwing; sometimes additional minute ones on the forewing in space 2 or on the hindwing in space 1.

Below — forewing plain brown, hindwing mottled; submarginal bands pronounced. Forewing ocellus as above; hindwing with two pairs (apical and tornal) of conjoined ocelli: apical one has black rings always joined, and sometimes a third white pupil, tornal one has black rings touching or nearly so.

*Female* — As male but larger and with ocelli larger. The yellow ring round the apical ocellus of the upperforewing of the holotype is 7 mm. in diameter.

DIFFERENCE WITH NOMINATE RACE

The main difference is the larger size of these ocelli, also the fact that the underside tornal ones are subequal, and the underside colour slightly more greyish.

SIZE

*Measurement* — forewing base to apex —

Male — 22-23 mm.

Female — 26-28 mm.

HABITAT

It inhabits open jungly hillsides, and is less confined to shady places than the related *Callerebias*. It is often found by streams, but usually singly, and has not been observed to congregate on damp ground as the *Callerebias* have.

DISTRIBUTION

It occurs in both far East Nepal (East of Arun), and in Central Nepal in Gandaki basin (paratypes (1)-(3)) with a total altitude range of 2600-4900 ft. (800-1500 m.).

NOTE — Specimens from Kathmandu Valley (between the two localities, but at higher altitude) appear to belong to the nominate race, as do those from further west in Nepal.

DATA

*Allotype* male — Ilam 24 Sept. '75 4300 ft.

COMPARISON OF THE FOUR NEPAL SUBSPECIES OF *Parnassius epaphus*

	<i>boschmai</i>	<i>capdevillei</i>	<i>robertsi</i>	<i>chiddii</i>
Forewing length	22-23 mm	24-25 mm	25-26 mm	25 mm
Ground colour	white	white	grey	F.W. grey, H.W. white
Black markings	light	light	heavy	heavy
Red spots (H.W.)	small orange	large red	large red	large red
F. W. submarginal black markings	irregular narrow band	band at apex, separate spots at tornus	uniform distinct band	wide diffuse band
H. W. submarginal black markings	narrow lunules- touching	v. small lunules- separate	large lunules- separate	wide lunules- joined

(1300 m.)  
*Holotype* female — Ilam 3 Oct. '75 4400 ft.  
 (1340 m.)  
*Paratypes* (1) m. Barang Barung GORKHA  
 8 Oct. '77 3400 ft. (1040 m.)  
 (2) f. Maikot, GORKHA 12 Oct. '77 3900  
 ft. (1200 m.)  
 (3) m. Phaewa Lake, POKHARA 23 Sept.  
 '79 2700 ft. (820 m.)

(4) m. Sallari Ban, DANKUTA 18 Oct.  
 '79 4400 ft. (1340 m.)  
 (5) f. Kowrini, TERATHUM 21 Oct. '79  
 4900 ft. (1500 m.)  
 (6) f. Phidim 23 Oct. '79 3600 ft. (1100  
 m.)  
 (7) f. Chisso Pani, ILAM 1 Nov. '79  
 2600 ft. (800 m.)

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